

IRIC 105 Conference Rm. 3:30pm

Moderator: Matt Phillips

Minutes Taker: Cooper Atkinson

Present: David Arnett, Shea Morrison, Dr. Herb Hess, Nick Bachus, Cooper Atkinson, Justin Pettingill, Dr. Feng Li, Matt Phillips, Kyle Petersen

Late: Dr. Herb Hess

Absent: Brian Cartwright, Andrew Jones

- **Updates from Teams**

- Stator Design Team Updates

- Electrical team

- Shea – looking into Lipo's research to get more FRRM info.
      - Matt – Alpha function no longer has to be a function of frequency
        - Simplifies further calculations.
        - Still working on getting saw tooth waveforms

- Mechanical team

- Heat transfer EES code working
        - Verified by Justin, Rick and Solidworks
      - Portion of fatigue code working. Outputting diameters properly
      - Fatigue calculation for keyway under investigation
        - Differing methods
        - Meeting with Dr. Stephens to determine correct method
      - Working on ANSYS structures tutorials

- Controls team

- Meeting to work on coding for the encoder.
      - Getting ready to look into physics of it
    - Single axis code should be working next week
      - Vertically levitating a plate.
      - Theoretically would transfer directly to flywheel
    - Researching how to connect the power electronics

- **Updates from Mentors (Dr. Hess, David, Justin)**

- David

- Payment didn't make it for the encoder, so now we have to track down what happened

- Justin

- Kade has quote and manufacturing plan for mounting the encoder
    - Nick and Justin drilled holes so the plate can directly mounted on the low-speed flywheel
    - Hoping to move the low-speed flywheel in the next week or so

- Dr. Hess
  - No updates on ANSYS
- **Tuesday Meeting Updates**
  - None
- **Updates from Senior Design (Dr. Feng Li)**
  - ME Design review: Thursday February 9<sup>th</sup> 2:30pm
  - Controls Design review: Friday February 10<sup>th</sup> at 3:30pm
  - Logbooks due end of February
- **Other Updates**
  - Get lab safety papers to David
- **Next meeting review (W/O January 09, 2017)**

Moderator: Cooper Atkinson

Minutes Taker: Nick Bachus
- **Adjourn**